REMARKS

Claims 1, 3-34, 36-43, 45-57 and 59-70 are pending in the application.

Claims 1, 3-34, 36-43, 45-57 and 59-70 have been rejected.

Claims 1, 43, 57, and 63 have been amended. No new matter has been added. Support for these claim amendments can be found, at least, in ¶¶ [0029], [0041], [0049] and Figures 1-3 of the originally-filed Application.

Informalities

Claims 63 stands objected to for lacking proper antecedent basis. Applicants have made appropriate corrections.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1, 3-5, 43, 45-47, 57, and 59-61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson et al. (USPN 5,959,989) ("Gleeson") in view of U.S. Beck et al. (USPPN 2001/0014097) ("Beck"). Office Action, p. 3. Applicants respectfully traverse this rejection.

Claims 13-17, 50-54, and 64-68 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte et al. (USPPN 2003/0198231) ("Kalkunte") in view of Beck. Office Action, p. 10. Applicants respectfully traverse this rejection.

Claims 6-7, 48, and 62 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Ellis et al. (USPPN 2002/0126671) ("Ellis"). Office Action, p. 19. Applicants respectfully traverse this rejection.

Claims 8-12, 49, and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Kalkunte. Office Action, p. 22. Applicants respectfully traverse this rejection.

Claims 34, 36-37, and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck and further in view of Gallo et al. (USPN 6,760,776) ("Gallo"). Office Action, p. 27. Applicants respectfully traverse this rejection.

Claims 40-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck, further in view of Gallo and further in view of Kalkunte. Office Action, p. 30. Applicants respectfully traverse this rejection.

Claim 38 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Gleeson in view of Beck, further in view of Gallo and further in view of Ellis. Office Action, p. 33. Applicants respectfully traverse this rejection.

Claims 18, 55, and 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck and further in view of Ellis. Office Action, p. 34. Applicants respectfully traverse this rejection.

Claims 19-22, 56, and 70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck and further in view of Gleeson. Office Action, p. 35. Applicants respectfully traverse this rejection.

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Beck, further in view of Gleeson, and further in view of Ellis. Office Action, p. 39. Applicants respectfully traverse this rejection.

Claims 24 and 30-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo. Office Action, p. 40. Applicants respectfully traverse this rejection.

Claims 25, 26, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo and further in view of Gleeson. Office Action, p. 43. Applicants respectfully traverse this rejection.

Claims 27 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo, further in view of Gleeson and further in view of Ellis. Office Action, p. 44. Applicants respectfully traverse this rejection.

Claim 33 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kalkunte in view of Gallo and further in view of Ellis. Office Action, p. 46. Applicants respectfully traverse this rejection.

Claim 1 is representative of independent Claims 43 and 57 and recites as follows:

> 1.   A method comprising:
> receiving a packet, the packet comprising a multicast destination address; and
> sending a copy of the packet to a virtual network device sub-unit via a virtual
>   network device link, wherein
>   the virtual network device link couples two virtual network device sub-
>   units,
>   the two virtual network device sub-units are configured to operate as a
>   single virtual network device,
>   the virtual network device is configured to forward the packet to other
>   layers within a network, and
>   the sending comprises sending at most one copy of the packet from one
>   virtual network device sub-unit to another via the virtual network
>   device link.

The Office Action relies on Gleeson and Beck, in combination, to disclose the elements of Claim 1. *See* Office Action, pp. 3-4. However, the cited sections of Gleeson and

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Beck, alone or in combination, fail to show, teach, or even suggest all the elements of Claim 1.

First, the cited sections of Gleeson fail to show, teach, or even suggest a virtual network device link coupling two virtual network device subunits and the two virtual network device subunits being configured to operate as a single virtual network device. The Office Action attempts to provide this missing disclosure by relying on Beck. *See* Office Action, p. 6.

The cited sections of Beck disclose a cluster of processor nodes with some processor nodes being associated and coupled to a virtual subnet. *See* Beck, ¶ [0064]. In addition, the cited sections of Beck disclose that each of the processor nodes associated with a virtual subnet advertises the location of the virtual subnet to routers in a network. *Id.* The Office Action equates Beck's cluster of processor nodes being associated and coupled to a virtual subnet with the claimed virtual network device link coupling two network device subunits and the two sub-units being configured to operate as a single virtual network device. Office Action, p. 4.

Even if Beck's cluster of processor nodes could somehow be equated to the claimed virtual network device sub-units (a point Applicants do not concede), the cited sections of Beck fail to show, teach, or even suggest that Beck's processing nodes are configured to operate as a single virtual network device and are <u>configured to forward a packet to other layers in a network</u>. This is because the cited sections of Beck simply disclose a cluster of processor nodes, which do not forward packets to other layers in a network and are not configured to do so either. On the contrary, the cited sections of Beck disclose that the processor nodes in a cluster receive data packets from a router after

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being identified as being associated with a virtual subnet and subsequently pass the packets to other processor nodes within the cluster. *See* Beck, ¶¶ [0069]-[0070]. Thus, there is no teaching or suggestion in Beck that the processor nodes are configured to forward a packet to other layers in a network. Therefore, the cited sections of Beck fail to show, teach, or even suggest two virtual network device subunits being configured to forward a packet to other layers in a network.

For at least these reasons, the cited sections of Gleeson and Beck, alone or in combination, fail to show, teach, or even suggest all the elements of Claims 1, 43, and 57. Thus, Applicants respectfully request the reconsideration and withdrawal of the rejection to Claims 1, 43, 57, and claims depending therefrom.

Claim 13 is representative of independent Claims 50 and 64 and recites as follows:

> 13.   A method, comprising:
> receiving a packet via a virtual network device link, the packet comprising a
>   unicast destination address, wherein
>   the virtual network device link couples two virtual network device sub-
>   units, and wherein the two virtual network device sub-units are
>   configured to operate as a single virtual network device; and
> performing an egress lookup for the packet in response to the receiving the
>   packet, wherein
>   the performing the egress lookup comprises allocating a non-primary entry
>   corresponding to a source address of the packet in the lookup table.

The Office Action relies on Kalkunte and Beck, in combination, to disclose the elements of Claim 13. *See* Office Action, pp. 10-12. However, the cited sections of Kalkunte and Beck, alone or in combination, fail to show, teach, or even suggest all the elements of Claim 13.

Kalkunte discloses a method for forwarding unicast packets in a network switch fabric. *See* Kalkunte, Abstract. In particular, the cited sections of Kalkunte disclose the receipt of a unicast packet by fabric ingress, the validation of a packet type, egress port, and destination module id information in a packet header, and the forwarding of the packet to an egress port in a fabric. *See* Kalkunte, ¶ [0037]. In addition, the cited sections of Kalkunte disclose configurations in which destination modules are directly connected to a fabric and other configurations having one or more paths to a destination module in a fabric. *Id.*

The Office Action asserts that Kalkunte's configuration having more than one path to a destination module in a fabric is equivalent to having a non-primary entry corresponding to a unicast destination address and choosing another egress port based on the ingress port. *See* Office Action, p. 11. However, the cited sections of Kalkunte fail to show, teach, or even suggest performing an egress lookup that comprises allocating a non-primary entry corresponding to a source address of a packet in the lookup table. This is because having more than one path to a destination module and choosing another egress port based on the ingress port is not equivalent to allocating or even having a non-primary entry to a source address of a packet in a lookup table. In addition, the cited sections of Kalkunte disclose choosing an egress port based on fabric ingress and destination module id for configurations having multiple paths to a destination module in a fabric. *See* Kalkunte, ¶ [0037]. Thus, Kalkunte fails to disclose an allocating operation for allocating a non-primary entry in a lookup table, and certainly fails to disclose that such allocation of a non-primary entry is performed as part of an egress lookup. Hence, the cited sections of Kalkunte fail to show, teach, or even suggest performing an egress

lookup that comprises allocating a non-primary entry corresponding to a source address of a packet in the lookup table.

In addition, the cited sections of Beck were not relied upon by the Office Action to show, teach, or even suggest the above limitations.

For at least these reasons, the cited sections of Kalkunte and Beck, alone or in combination, fail to show, teach, or even suggest all the elements of Claims 13, 50, and 64. Thus, Applicants respectfully request the reconsideration and withdrawal of the rejection to Claims 13, 50, and 64, and claims depending therefrom.

Claim 24 is representative of independent Claim 34 and recites as follows:

24.   A method comprising:
        receiving a packet via a virtual network device link;
        performing one of an ingress lookup and an egress lookup for the packet,
            wherein
            the ingress lookup is performed for the packet if the packet
                includes a multicast destination address;
            the egress lookup is performed for the packet if the packet includes
                a unicast destination address, wherein
                the performing the egress lookup comprises allocating a
                    non-primary entry corresponding to a source
                    address of the packet in the lookup table; and
            a primary lookup table entry can be allocated in response to an
                ingress lookup but not in response to an egress lookup.

The Office Action relies on Kalkunte and Gallo, in combination, to disclose the elements of Claim 24. *See* Office Action, pp. 40-42. However, the cited sections of Kalkunte and Gallo, alone or in combination, fail to show, teach, or even suggest all the elements of Claim 24.

The cited sections of Kalkunte disclose the receipt of a unicast packet by fabric ingress, the validation of an egress port and destination module id information, and the

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forwarding of the packet to an egress port in a fabric. *See* Kalkunte, ¶ [0037]. In addition, the cited sections of Kalkunte disclose configurations in which more than one path to a destination module in a fabric may exist, which results in a fabric having to choose an egress port based on the fabric ingress port and destination module id. *Id.*

The Office Action asserts that Kalkunte's configuration having more than one path to a destination module in a fabric is equivalent to having a non-primary entry corresponding to a unicast destination address and choosing another egress port based on the ingress port. Office Action, pp. 40-41. Applicants respectfully re-iterate the above made arguments (with reference to Claim 13) that the cited sections of Kalkunte fail to show, teach, or even suggest performing an egress lookup that comprises <u>allocating a non-primary entry</u> corresponding to a source address of a packet in the lookup table.

Moreover, the cited sections of Kalkunte fail to show, teach, or even suggest performing one of an ingress lookup and an egress lookup for a packet, wherein the ingress lookup is performed for the packet if the packet includes a multicast destination address. The cited sections of Kalkunte also fail to show, teach, or even suggest allocating a primary lookup table entry in response to an ingress lookup but not in response to an egress lookup. In an attempt to resolve this missing disclosure in Kalkunte, the Office Action relies on Gallo to disclose these claim elements. *See* Office Action, p. 41. However, Gallo also fails to show, teach, or even suggest these claim elements.

The cited sections of Gallo disclose a frame processing flow that includes receiving frames from an ingress, applying policy filters to the frames according to a filter look-up, determining if the frame has an L3 address or characteristic of an L3

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registration, passing the frame to a L3 ingress processor, and routing to an L4 processing block if L4 processing is required. *See* Gallo, 3:47-63.

The Office Action equates Gallo's L3 ingress processor having a routing table with special identifiers used to determine if L4 processing is required with allocating a primary lookup table in response to an ingress lookup. *See* Office Action, p. 41. However, the cited sections of Gallo fail to disclose the claimed elements.

First, the cited sections of Gallo fail to disclose <u>allocating a primary lookup entry</u> in response to an ingress lookup. In fact, the existence of a routing table with special identifiers used for determining if L4 processing is required is not equivalent to allocating a primary lookup entry. The act of using a routing table to make a determination is not equivalent to allocating a primary lookup entry. Thus, the cited sections of Gallo fail to show, teach, or even suggest allocating a primary lookup entry in response to an ingress lookup.

In addition, the cited sections of Gallo fail to disclose that a primary lookup table entry is <u>not allocated in response to an egress lookup</u>. The Office Action equates Gallo's teachings with allocating a primary lookup table in response to an ingress lookup, but fails to show how Gallo's teachings disclose that an allocating operation is <u>not performed</u> in response to an egress lookup. In fact, an egress lookup is not taught or even suggested in Gallo. Thus, the cited sections of Gallo cannot be said to disclose that the allocating of a primary lookup table is not performed in response to an egress lookup.

For at least these reasons, the cited sections of Kalkunte and Beck, alone or in combination, fail to show, teach, or even suggest all the elements of Claims 13, 50, and

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64. Thus, Applicants respectfully request the reconsideration and withdrawal of the rejection to Claims 13, 50, and 64, and claims depending therefrom.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5094.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicants hereby petition for such extensions. Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

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